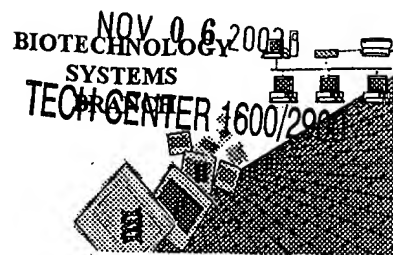# RAW SEQUENCE LISTING
ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: _09/647,946_

Source: _1600_

Date Processed by STIC: _10/29/03_

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY
FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER VERSION 4.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:
    http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to (EFFECTIVE 12/01/2003):
   U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/2003

BEST AVAILABLE COPY

Raw Sequence Listing Error Summary

ERROR DETECTED   SUGGESTED CORRECTION   SERIAL NUMBER: _09/647,946_

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1 ____ Wrapped Nucleics
Wrapped Aminos — The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."

2 ____ Invalid Line Length — The rules require that a line not exceed 72 characters in length. This includes white spaces.

3 ____ Misaligned Amino Numbering — The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.

4 ____ Non-ASCII — The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.

5 ____ Variable Length — Sequence(s)____contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.

6 ____ PatentIn 2.0 "bug" — A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.

7 ____ Skipped Sequences (OLD RULES) — Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence:
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
(i)   SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.

8 ____ Skipped Sequences (NEW RULES) — Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence.
<210> sequence id number
<400> sequence id number
000

9 ____ Use of n's or Xaa's (NEW RULES) — Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

10 ____ Invalid <213> Response — Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence

11 ____ Use of <220> — Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)

12 ____ PatentIn 2.0 "bug" — Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

13 ____ Misuse of n/Xaa — "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid

1600

RAW SEQUENCE LISTING   DATE: 10/29/2003
PATENT APPLICATION: US/09/647,946   TIME: 10:00:17

Input Set : A:\SEQ-APP.txt
Output Set: N:\CRF4\10292003\I647946.raw

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 3 <110> APPLICANT: Brunham, Robert C
 4        University of Manitoba
 6 <120> TITLE OF INVENTION: DNA IMMUNIZATION AGAINST CHLAMYDIA INFECTION
 8 <130> FILE REFERENCE: 1038-1094 MIS:jb
10 <140> CURRENT APPLICATION NUMBER: 09/647,946
11 <141> CURRENT FILING DATE: 2000-12-06
13 <150> PRIOR APPLICATION NUMBER: PCT/CA99/00292
14 <151> PRIOR FILING DATE: 1999-04-07
16 <150> PRIOR APPLICATION NUMBER: 09/055,765
17 <151> PRIOR FILING DATE: 1998-04-07
19 <160> NUMBER OF SEQ ID NOS: 17
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23 <210> SEQ ID NO: 1
24 <211> LENGTH: 393
25 <212> TYPE: PRT
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35              20                  25                  30
37 Leu Met Ile Asp Gly Ile Leu Trp Glu Gly Phe Gly Gly Asp Pro Cys
38          35                  40                  45
40 Asp Pro Cys Thr Thr Trp Cys Asp Ala Ile Ser Met Arg Met Gly Tyr
41      50                  55                  60
43 Tyr Gly Asp Phe Val Phe Asp Arg Val Leu Lys Thr Asp Val Asn Lys
44  65                  70                  75                  80
46 Glu Phe Gln Met Gly Asp Lys Pro Thr Ser Thr Thr Gly Asn Ala Thr
47              85                  90                  95
49 Ala Pro Thr Thr Leu Thr Ala Arg Glu Asn Pro Ala Tyr Gly Arg His
50          100                 105                 110
52 Met Gln Asp Ala Glu Met Phe Thr Asn Ala Ala Cys Met Ala Leu Asn
53          115                 120                 125
55 Ile Trp Asp Arg Phe Asp Val Phe Cys Thr Leu Gly Ala Ser Ser Gly
56      130                 135                 140
58 Tyr Leu Lys Gly Asn Ser Ala Ser Phe Asn Leu Val Gly Leu Phe Gly
59 145                 150                 155                 160
62 Asp Asn Glu Asn Gln Ser Thr Val Lys Thr Asn Ser Val Pro Asn Met
63              165                 170                 175
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66          180                 185                 190
68 Trp Ser Val Gly Ala Arg Ala Ala Leu Trp Glu Cys Gly Cys Ala Thr
69          195                 200                 205
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Input Set : **A:\SEQ-APP.txt**
Output Set: **N:\CRF4\10292003\I647946.raw**

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75  225             230             235             240
77  Gly Tyr Val Gly Gln Glu Phe Pro Leu Ala Leu Ile Ala Gly Thr Asp
78              245             250             255
80  Ala Ala Thr Gly Thr Lys Asp Ala Ser Ile Asp Tyr Asn Glu Trp Gln
81              260             265             270
83  Ala Ser Leu Ala Leu Ser Tyr Arg Leu Asn Met Phe Thr Pro Tyr Ile
84              275             280             285
86  Gly Val Lys Trp Ser Arg Ala Ser Phe Asp Ala Asp Thr Ile Arg Ile
87      290             295             300
89  Ala Gln Pro Lys Ser Ala Thr Ala Ile Phe Asp Thr Thr Thr Leu Asn
90  305             310             315             320
92  Pro Thr Ile Ala Gly Ala Gly Asp Val Lys Ala Ser Ala Glu Gly Gln
93              325             330             335
95  Leu Gly Asp Thr Met Gln Ile Val Ser Leu Gln Leu Asn Lys Met Lys
96              340             345             350
98  Ser Arg Lys Ser Cys Gly Ile Ala Val Gly Thr Thr Ile Val Asp Ala
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122             20              25              30
124 Leu Met Ile Asp Gly Ile Leu Trp Glu Gly Phe Gly Gly Asp Pro Cys
125             35              40              45
127 Asp Pro Cys Thr Thr Trp Cys Asp Ala Ile Ser Met Arg Met Gly Tyr
128         50              55              60
130 Tyr Gly Asp Phe Val Phe Asp Arg Val Leu Lys Thr Asp Val Asn Lys
131 65              70              75              80
133 Glu Phe Gln Met Gly Ala Lys Pro Thr Thr Thr Gly Asn Ala Val
134             85              90              95
136 Ala Pro Ser Thr Leu Thr Ala Arg Glu Asn Pro Ala Tyr Gly Arg His
137             100             105             110
139 Met Gln Asp Ala Glu Met Phe Thr Asn Ala Ala Cys Met Ala Leu Asn
140             115             120             125
142 Ile Trp Asp Arg Phe Asp Val Phe Cys Thr Leu Gly Ala Ser Ser Gly
143     130             135             140
145 Tyr Leu Lys Gly Asn Ser Ala Ser Phe Asn Leu Val Gly Leu Phe Gly
146 145             150             155             160
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RAW SEQUENCE LISTING   .DATE: 10/29/2003
PATENT APPLICATION: **US/09/647,946** TIME: 10:00:17

Input Set : **A:\SEQ-APP.txt**
Output Set: **N:\CRF4\10292003\I647946.raw**

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154 Ala Trp Ser Val Gly Ala Arg Ala Ala Leu Trp Glu Cys Gly Cys Ala
155     195             200             205
157 Thr Leu Gly Ala Ser Phe Gln Tyr Ala Gln Ser Lys Pro Lys Val Glu
158     210             215             220
160 Glu Leu Asn Val Leu Cys Asn Ala Ala Glu Phe Thr Ile Asn Lys Pro
161 225             230             235             240
163 Lys Gly Tyr Val Gly Lys Glu Leu Pro Leu Asp Leu Thr Ala Gly Thr
164             245             250             255
166 Asp Ala Ala Thr Gly Thr Lys Asp Ala Ser Ile Asp Tyr Asn Glu Trp
167             260             265             270
169 Gln Ala Ser Leu Ala Leu Ser Tyr Arg Leu Asn Met Phe Thr Pro Tyr
170             275             280             285
172 Ile Gly Val Lys Trp Ser Arg Ala Ser Phe Asp Ala Asp Thr Ile Arg
173     290             295             300
175 Ile Ala Gln Pro Lys Ser Ala Glu Thr Ile Phe Asp Val Thr Thr Leu
176 305             310             315             320
178 Asn Pro Thr Ile Ala Gly Ala Gly Asp Val Lys Thr Ser Ala Glu Gly
179             325             330             335
181 Gln Leu Gly Asp Thr Met Gln Ile Val Ser Leu Gln Leu Asn Lys Met
182             340             345             350
184 Lys Ser Arg Lys Ser Cys Gly Ile Ala Val Gly Thr Thr Ile Val Asp
185     355             360             365
187 Ala Asp Lys Tyr Ala Val Thr Val Glu Thr Arg Leu Ile Asp Glu Arg
188     370             375             380
190 Ala Ala His Val Asn Ala Gln Phe Arg Phe
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208             20             25             30
210 Leu Met Ile Asp Gly Ile Leu Trp Glu Gly Phe Gly Gly Asp Pro Cys .
211             35             40             45
213 Asp Pro Cys Thr Thr Trp Cys Asp Ala Ile Ser Met Arg Met Gly Tyr
214     50             55             60
216 Tyr Gly Asp Phe Val Phe Asp Arg Val Leu Gln Thr Asp Val Asn Lys
217 65             70             75             80
219 Glu Phe Gln Met Gly Ala Lys Pro Thr Ala Thr Thr Gly Asn Ala Ala
220             85             90             95
222 Ala Pro Ser Thr Cys Thr Ala Arg Glu Asn Pro Ala Tyr Gly Arg His
223             100             105             110
```

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225 Met Gln Asp Ala Glu Met Phe Thr Asn Ala Ala Tyr Met Ala Leu Asn
226         115             120             125
228 Ile Trp Asp Arg Phe Asp Val Phe Cys Thr Leu Gly Ala Thr Ser Gly
229     130             135             140
231 Tyr Leu Lys Gly Asn Ser Ala Ser Phe Asn Leu Val Gly Leu Phe Gly
232 145             150             155             160
234 Asp Asn Glu Asn Gln Ser Thr Val Lys Lys Asp Ala Val Pro Asn Met
235             165             170             175
237 Ser Phe Asp Gln Ser Val Val Glu Leu Tyr Thr Asp Thr Thr Phe Ala
238             180             185             190
240 Trp Ser Val Gly Ala Arg Ala Ala Leu Trp Glu Cys Gly Cys Ala Thr
241     195             200             205
243 Leu Gly Ala Ser Phe Gln Tyr Ala Gln Ser Lys Pro Lys Val Glu Glu
244     210             215             220
246 Leu Asn Val Leu Cys Asn Ala Ala Glu Phe Thr Ile Asn Lys Pro Lys
247 225             230             235             240
249 Gly Tyr Val Gly Lys Glu Phe Pro Leu Asp Leu Thr Ala Gly Thr Asp
250             245             250             255
252 Ala Ala Thr Gly Thr Lys Asp Ala Ser Ile Asp Tyr Asn Glu Trp Gln
253             260             265             270
255 Ala Ser Leu Ala Leu Ser Tyr Arg Leu Asn Met Phe Thr Pro Tyr Ile
256     275             280             285
258 Gly Val Lys Trp Ser Arg Ala Ser Phe Asp Ala Asp Thr Ile Arg Ile
259     290             295             300
261 Ala Gln Pro Lys Leu Ala Thr Ala Ile Phe Asp Thr Thr Thr Leu Asn
262 305             310             315             320
264 Pro Thr Ile Ala Gly Ala Gly Glu Val Lys Ala Asn Ala Glu Gly Gln
265             325             330             335
267 Leu Gly Asp Thr Met Gln Ile Val Ser Leu Gln Leu Asn Lys Met Lys
268     340             345             350
270 Ser Arg Lys Ser Cys Gly Ile Ala Val Gly Thr Thr Ile Val Asp Ala
271     355             360             365
273 Asp Lys Tyr Ala Val Thr Val Glu Thr Arg Leu Ile Asp Glu Arg Ala
274     370             375             380
276 Ala His Val Asn Ala Gln Phe Arg Phe
277 385             390
281 <210> SEQ ID NO: 4
282 <211> LENGTH: 393
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293             20              25              30
295 Leu Met Ile Asp Gly Ile Leu Trp Glu Gly Phe Gly Gly Asp Pro Cys
296         35              40              45
298 Asp Pro Cys Thr Thr Trp Cys Asp Ala Ile Ser Met Arg Met Gly Tyr
299     50              55              60
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RAW SEQUENCE LISTING   DATE: 10/29/2003
PATENT APPLICATION: US/09/647,946   TIME:· 10:00:17

Input Set : **A:\SEQ-APP.txt**
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301 Tyr Gly Asp Phe Val Phe Asp Arg Val Leu Glu Thr Asp Val Asn Lys
302  65                  70                  75                  80
304 Glu Phe His Met Gly Ala Lys Pro Thr Ser Thr Thr Gly Asn Ala Thr
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307 Ala Pro Thr Thr Leu Thr Ala Arg Glu Asn Pro Ala Tyr Gly Arg His
308             100                 105                 110
310 Met Gln Asp Ala Glu Met Phe Thr Asn Ala Ala Cys Met Ala Leu Asn
311             115                 120                 125
313 Ile Trp Asp Arg Phe Asp Val Phe Cys Thr Leu Gly Ala Thr Ser Gly
314         130                 135                 140
316 Tyr Leu Lys Gly Asn Ser Ala Ser Phe Asn Leu Val Gly Leu Phe Gly
317 145                 150                 155                 160
319 Asp Asn Glu Asn Gln Lys Thr Val Lys Ala Glu Ser Val Pro Asn Met
320                 165                 170                 175
322 Ser Phe Asp Gln Ser Val Val Glu Leu Tyr Thr Asp Thr Thr Phe Ala
323             180                 185                 190
325 Trp Ser Val Gly Ala Arg Ala Ala Leu Trp Glu Cys Gly Cys Ala Thr
326         195                 200                 205
328 Leu Gly Ala Ser Phe Gln Tyr Ala Gln Ser Lys Pro Lys Val Glu Glu
329         210                 215                 220
331 Leu Asn Val Leu Cys Asn Ala Ala Glu Phe Thr Ile Asn Lys Pro Lys
332 225                 230                 235                 240
334 Gly Tyr Val Gly Lys Glu Phe Pro Leu Asp Leu Thr Ala Gly Thr Asp
335                 245                 250                 255
337 Ala Ala Thr Gly Thr Lys Asp Ala Ser Ile Asp Tyr Asn Glu Trp Gln
338             260                 265                 270
340 Ala Ser Leu Ala Leu Ser Tyr Arg Leu Asn Met Phe Thr Pro Tyr Ile
341         275                 280                 285
343 Gly Val Lys Trp Ser Arg Ala Ser Phe Asp Ala Asp Thr Ile Arg Ile
344         290                 295                 300
346 Ala Gln Pro Lys Ser Ala Thr Ala Ile Phe Asp Thr Thr Thr Leu Asn
347 305                 310                 315                 320
349 Pro Thr Ile Ala Gly Ala Gly Asp Val Lys Thr Gly Thr Glu Gly Gln
350                 325                 330                 335
352 Leu Gly Asp Thr Met Gln Ile Val Ser Leu Gln Leu Asn Lys Met Lys
353             340                 345                 350
355 Ser Arg Lys Ser Cys Gly Ile Ala Val Gly Thr Thr Ile Val Asp Ala
356         355                 360                 365
358 Asp Lys Tyr Ala Val Thr Val Glu Thr Arg Leu Ile Asp Glu Arg Ala
359         370                 375                 380
361 Ala His Val Asn Ala Gln Phe Arg Phe
362 385                 390
367 <210> SEQ ID NO: 5
368 <211> LENGTH: 394
369 <212> TYPE: PRT
370 <213> ORGANISM: amino acid
372 <400> SEQUENCE: 5
374 Met Lys Lys Leu Leu Lys Ser Val Leu Val Phe Ala Ala Leu Ser Ser
375  1               5                  10                  15
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The types of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 10/29/2003
PATENT APPLICATION: **US/09/647,946**   TIME: 10:00:18

Input Set : **A:\SEQ-APP.txt**
Output Set: **N:\CRF4\10292003\I647946.raw**

<u>**Invalid Line Length:**</u>
The rules require that a line not exceed 72 characters in length. This includes spaces.

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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 10/29/2003
PATENT APPLICATION: **US/09/647,946**   TIME: 10:00:18

Input Set : **A:\SEQ-APP.txt**
Output Set: **N:\CRF4\10292003\I647946.raw**

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VERIFICATION SUMMARY   DATE: 10/29/2003
PATENT APPLICATION: **US/09/647,946**   TIME: 10:00:18

Input Set : **A:\SEQ-APP.txt**
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